

Commissioner of Patents
Serial No. 10/670,899
Response Date November 29, 2007
Reply to Office Action dated June 5, 2007
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AMENDMENT TO THE DRAWING

Please replace the original figures with the Replacement Sheets being submitted with this paper. As requested by the Examiner, the Applicants are submitting formal versions of the original figures to correct all informalities in the originally filed drawing sheets.

REMARKS

I. Status of the Application.

Claims 1 and 3-25 of the Application were pending as of the date of the Office Action. In the Office Action, the Examiner requested that the figures be replaced by formal drawings, rejected claims 1, 3-5, 9, 14, 17-18, and 21-23, and determined claims 7-8, 11-12, 15-16, and 19-20 would be allowable if rewritten in independent form. In rejecting claims 1, 3-5, 9, 14, 17-18, and 21-23, the Examiner alleged that: (i) claims 1, 3, and 13 are anticipated by U.S. Patent No. 5,473,701 to Cezanne ("Cezanne"); (ii) claim 4 is obvious over Cezanne in view of the Examiner's official notice; (iii) claims 5, 9, 14, 17-18, and 21-23 are obvious over Cezanne in view of U.S. Patent No. 6,275,592 to Vartiainen ("Vartiainen"); and (iv) claims 6 and 10 are obvious over Cezanne in view of Vartiainen and further in view of U.S. Patent No. 5,471,538 to Sasaki ("Sasaki"). While the Applicants agree with the Examiner's conclusion of allowable subject matter, the Applicants traverse the rejections of claims 1, 3-5, 9, 14, 17-18, and 21-23 for the reasons set forth below.

II. Applicants' Amendments Do Not Constitute New Matter.

Applicants respectfully submit that the amendments to the claims and to the figures do not add new matter to the Application. Applicants have merely complied with the Examiner's request to submit formal versions of the originally filed figures and thus, respectfully submit that the Replacement Sheets are supported by the Application as originally filed. Applicants have amended claims 1 and 13 to clarify the claimed invention and respectfully submit that these amendments are supported by the Application as originally filed. For example, and among other places, the amendments to claim 1 and claim 13 are supported on pages 5-11 and in Figure 3.

Applicants have amended the specification only to further clarify the description and respectfully submit that the amendments are supported by the Application as originally filed. Accordingly, Applicants respectfully submit that the amendments to claims 1 and 13 and the Replacement Sheets do not constitute new matter and request entry of these amendments.

III. The Restriction Requirement.

Because the Examiner has made the restriction requirement final, Applicants have canceled claims 24-25 from the Application in order to expedite the examination of this Application. Applicants respectfully request that the Restriction Requirement be withdrawn, because the Applicants have elected to prosecute the claims of Species I (claims 1 and 3-23) and canceled the claims of Species II (claims 24 and 25). In view of the Examiner's conclusion that the claims of Species I are independent and distinct from Species II, Applicants reserve the right to file a divisional patent application to continue to prosecute claims related to Species II. Regarding the Examiner's assertion that claim 25 cannot be found in the November 12, 2003 preliminary amendment, the Examiner's attention is drawn to page 8 of the preliminary amendment where claim 25 appears.

IV. The Objections To The Figures Should Be Withdrawn.

As requested by the Examiner, the Applicants have replaced the originally filed figures with formal drawings in the enclosed Replacement Sheets. The Replacement Sheets meet all the requirements of 37 C.F.R. §1.121. For these reasons, the Applicants request that the objections to the figures be withdrawn.

V. **The Rejections Of Claims 1, 3, and 13 As Being Anticipated By Cezanne Under 35 U.S.C. §102(b) Should Be Withdrawn.**

Applicants respectfully submit that the rejections of claims 1, 3, and 13 as being anticipated by Cezanne should be withdrawn because Cezanne does not disclose all the claimed elements of amended claims 1 and 13. "[A]nticipation requires that the four corners of a single, prior art document describe every element of the claimed invention." *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000); *see also*, MPEP §706.02(b) (a rejection under 102(b) can be overcome by showing that the prior art does not disclose all the limitations of the claims as either originally filed or as amended).

Cezanne does not disclose a method for producing a null towards an acoustical driver of a communication device or a microphone system for communication devices that has a signal flow processor that applies an electrical time delay only to the output of a first microphone element so that the first microphone element's output undergoes a phase change substantially equal to that which a coupling acoustical traveling wave undergoes between the time the wave arrives at the first microphone element and subsequently arrives at the second microphone element. Cezanne requires that a delay be applied to both the outputs of microphones 10 and 12 so that the delayed output of microphone 12 can be subtracted from the undelayed output from microphone 10 in subtraction circuit 40 and the delayed output of microphone 10 can be subtracted from the undelayed output of microphone 12 in subtraction circuit 45. (Col. 4, ll.56-63). In contrast, the signal flow processor of claim 1 and the step of utilizing a signal flow process in claim 13 applies a time delay to only the output of the first microphone. Thus, Cezanne does not disclose a signal flow processor, as claimed in amended claims 1, or a step of utilizing a signal flow

processor, as claimed in claim 13, that applies a time delay to only the output of the first microphone element so that the first microphone element's output undergoes a phase change substantially equal to that which a coupling acoustical traveling wave undergoes between the time the wave arrives at the first microphone element and subsequently arrives at the second microphone element.

Cezanne also does not disclose a method for producing a null towards an acoustical driver of a communication device or a microphone system for communication devices that has a signal flow processor that applies an amplitude gain only to the output of a second microphone element so that the second microphone element's output undergoes an amplitude gain substantially equal in magnitude to the amplitude attenuation which the wave undergoes between the time the wave arrives at the first microphone element and subsequently arrives at the second microphone element. Referring to Figure 3 of Cezanne, Cezanne utilizes preamplifiers 14 and 16 to apply the same 40 db gain to both of its microphones 10 and 12. (Col. 4, ll. 48-49). In contrast, system of claim 1 has and the method of claim 13 utilizes a signal flow processor that applies a gain to only the output of the second microphone element so that the second microphone element's output undergoes an amplitude gain substantially equal in magnitude to the amplitude attenuation which the wave undergoes between the time the wave arrives at the first microphone element and subsequently arrives at the second microphone element. For this reason, Applicants respectfully submit that the Examiner's conclusion that Cezanne's gain 16 corresponds to the claimed amplitude gain of claims 1 and 13 cannot be correct, because Cezanne's gain 16 that is applied to microphone 12 is equal to the gain 14 that is applied to microphone 14. Thus, Cezanne does not disclose a signal flow processor, as claimed in amended claim 1, or a step of utilizing a

signal flow processor, as claimed in claim 13, that applies a gain to only the output of the second microphone element so that the second microphone element's output undergoes an amplitude gain substantially equal in magnitude to the amplitude attenuation which the wave undergoes between the time the wave arrives at the first microphone element and subsequently arrives at the second microphone element.

Cezanne also does not disclose a method for producing a null towards an acoustical driver of a communication device or a microphone system for communication devices that has a signal flow processor that only subtracts the output of the first microphone from the output of the second microphone to create the null. To produce its null, Cezanne requires two subtractions to calculate its gain β (the subtraction of the delayed output of microphone 10 from the undelayed output of microphone 12 and the subtraction of the delayed output of microphone 12 from the undelayed output of microphone 10). (See Fig. 3; Col. 4, ll. 56-67; Col. 5, ll. 1-15). Once the gain β is calculated, β is applied to signal $c_B(t)$ (the signal that is produced from subtracting the delayed output from microphone 12 from the undelayed microphone 10). (See Fig. 3 and Col. 5, ll. 6-11). Finally, Cezanne's system performs a third subtraction that subtracts the amplified signal $\beta c_B(t)$ from signal $c_F(n)$ to yield the null. (See Fig. 3; Col. 4, ll. 56-67; Col. 5, ll. 1-15). In contrast, the signal flow processor claimed in claim 1 and the step of utilizing the signal flow processor in claim 13 only subtracts the delayed first output from the amplified second output to create the null. Thus, Applicants respectfully submit that Cezanne does not disclose a signal flow processor, as claimed in claim 1, or a step of utilizing a signal flow processor, as claimed in claim 13, that only subtracts the delayed output from the first microphone from the amplified output of the second microphone to create the null.

For the foregoing reasons, Applicants respectfully submit that Cezanne does not disclose all of the limitations of amended independent claims 1 and 13. Accordingly, Applicants respectfully submit that the rejections of claims 1 and 13 under 35 U.S.C. §102(b) should be withdrawn. Similarly, the rejection of claim 3 as being anticipated by Cezanne under 35 U.S.C. §102(b) should be withdrawn because claim 3 depends from and incorporates all the limitation of amended independent claim 1.

VI. The Rejections Of Claims 4, 5, 6, 9, 10, 14, 17-18 and 21-23 As Being Obvious Under 35 U.S.C. §103(a) Should Be Withdrawn.

Applicants respectfully submit that the rejection of claim 4 under 35 U.S.C. §103(a) as being obvious over Cezanne in view of the Examiner's notice should be withdrawn because this claim depends from amended independent claim 1. Similarly, Applicant's respectfully submit that the rejections of claims 5, 9, 14, 17-18, and 21-21 as being obvious over Cezanne in view of Vartiainen and the rejections of claims 6 and 10 as being obvious over Cezanne in view of Vartiainen and Sasaki should be withdrawn because each of these claims depend respectively from amended independent claims 1 and 13. The Applicants respectfully submit the rejections under 35 U.S.C. §103(a) are moot, because "[i]f an independent claim is not obvious under 35 U.S.C. §103, then any claim depending therefrom is not obvious." *Id.* As explained above, amended claim 1 and 13 are not anticipated or obvious over Cezanne because Cezanne does not disclose all of the claim limitations of amended claims 1 and 13. Accordingly, Applicants respectfully submit that the rejections of claims 4, 5, 6, 9, 10, 14, 17-18 and 21-23 under 35 U.S.C. §103(a) should be withdrawn because these claims each depend from and incorporate all the limitations of either allowable independent claims 1 and 13.

VII. Allowable Subject Matter.

While the Applicants agree with the Examiner's conclusion that claims 7-8, 11-12, 15-16, and 19-20 would be allowable if rewritten in independent form, Applicants respectfully submit that claims 1 and 13, as amended, are currently in allowable form. Thus, Applicants respectfully submit that it is not necessary for the Applicants to rewrite any of these claims in independent form in view of each of these claims depending from either allowable base claims 1 or 13.

VIII. Applicants Petition for an Extension of Time.

Applicants hereby petition for an extension of time of three (3) months, under 37 C.F.R. § 1.136(a), thereby extending the deadline for response, pursuant to 37 C.F.R. §§ 1.7(a) & 1.136(a), to Wednesday, December 5, 2007. Applicant authorizes payment for this extension in the amount of \$525.00 to be charged to the identified credit card. When doing so, please reference the above-listed docket number for this file.

IX. Interview Request.

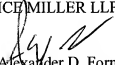
If the Examiner determines that there are any further objections or rejections that would prevent this Application from proceeding to allowance, the Examiner is invited to contact the undersigned to arrange an interview with the undersigned to discuss such objections or rejections.

CONCLUSION

For the reasons set forth above, allowance of this Application is respectfully requested. Applicants believe no fees are due at this time. In the event Applicants have inadvertently overlooked the need for payment of any fees, Applicants conditionally petition therefore, and authorize any deficiency to be charged to deposit account 09-0007. When doing so, please reference the above-listed docket number.

Respectfully submitted,

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